



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D119-796-101
Job Sheet 172346



Part No: D119-796-101

Job Qty: 1 ea

Part Name: Fwd Crosstube Installation With Step



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/15/18

Job Tracking No: RA194

Due Date: 2/28/18

Created By: Linda Lacelle

Type: Return

Description:

Note: DWG DSI9730 REV B, IIN-D119-796 REV F IPP REV:A NEW ISSUE 14-09-05 DD VERF:JLM IPP REV:B 14.10.22 AS PER PA1 DD VERF:JLM IPP REV:C 14.11.19 AS PER IIN REV.B DD VERF:JLM IPP REV:D 15.02.12 PER REV C JLM VERIFIED BY:DD IPP REV:E 15.05.13 PER REV D JLM VERIFIED BY:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		2/27/18	0.00	0.00	Start Up Stores/Pkg-1		AR FEB 16 2018
95	Crosstubes	1 pcs		2/28/18	0.00	10.00	Crosstubes-1	see attached	AR MAR 2 1 2018
120	QC	1 pcs		2/28/18	0.00	0.00	QC4		38
125	DC	1 pcs		2/28/18	0.00	0.00	DC		9-89
130	Packaging	1 pcs		2/28/18	0.00	0.00	Packaging3-1	LG050	AR MAR 2 1 2018
140	QC21-FG	1 Ea		2/28/18	0.00	0.00	QC21		DAS 21 MAR 2 1 2018

Part Op 125 - Photocopy bluefile & type labels per PPP D119-796-101 CHG004
Descriptions: 130 - Identify and pack for shipping as per PPP D119-796-101

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D119-796-101	Fwd Crosstube Installation With Step	1 Ea (1 ea)	90-Start up Operation	
D5123-3	Clamp Cushion	4 Ea (4 ea)	95-Crosstubes	
MS21920-22	Clamp	4 Ea (4 ea)	95-Crosstubes	
MS21920-24	Clamp	4 Ea (4 ea)	95-Crosstubes	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D119-796-101	1	1 5030449	0
95-Crosstubes	D5123-3	4	330	0
	MS21920-22 5013763	4	48	0
	MS21920-24 M138336-164	4	81	0

Part Specifications

Specifications could not be found.

DART aerospace		1270 ABERDEEN ST. HAWKESBURY, ON, CANADA K6A 1K7 TEL 1-613-632-5200 www.dartaero.com	
PATENT	N/A	CHG	CHG004
P/N	D119-796-101	STC	SH14-45
DESC.	Fwd Crosstube, w/ Peg Steps	STC	SR03504NY
LOT	S031514	STC	
MODEL	Agusta AW119MKII	STC	
TC APPROVAL # 09-89		MADE IN CANADA D2729-4	

Plex 2/15/18 1:43 PM dart.lacelle.linda

QQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Inspection Sheet Complete

RA194

Customer QA Ref #

0

Part Number	Batch / Serial #	Quantity	Part Complete	Rev/CHG Current	New Paperwork	New Labels	Disposition	Work order #	Work order instructions
D119-796-101	S031514	#VALUE!	☐ Yes	☐ Yes	☐ Yes	☐ Yes	MISSING	S038449	D119-796-101 was originally ship without paint (only on primer). Crosstube will need to be disassemble and rework to drawing as followed: D119-796-151 - Remove and scrap clamps MS21920-22 and cushion D5123-3. - Remove and keep step assembly D5149-041. D119-796-141 - Remove and scrap clamps MS21920-24. - Proceed as instructed on BOM from sequence 246. Assemble D119-796-151 using original step assembly D5149-041. Repackage with rest of original kit. Stock with new batch number at CHG 004. Add new labels and paper work.
D119-675-015	S031459								Kit complete with no damage and not open by customer. Still in original package. Stock with new batch number at CHG 001. Add new labels and paper work.
0									
0									
0									
0									

Date: 02/15/18 13:45 PM

Part: D119 - 796 - 101
Serial No/Batch: S042701
Revision: DS19730, IIN - D119 - 796
Inspector:



DAI
AEROSPACE
Container No: S042701
DAI Aerospace Ltd.
1270 Aberdeen Street
Markham, ON K9A 1K7
CANADA
TEL: 1 813 632-5200
Email: sales@daiaero.com
www.daiaerospace.com

Approval: P.D.

Date: 3-Feb-18

D119-796-141 Operations

Fwd Crosstube Installation Without Step (No Hardware)

Op No	Operation	Description	Workcenters	Supplier	Type	Weight (lbs)	BOM	Special Comments	Location
230	SprayPaint	***VERIFY BY _____ BATCH # TO MATCH W/O _____ ***VERIFY BY _____ PART # TO MATCH _____ W/O _____ ***MASK SCRIBE B# & P# AND VERIFY*** 1- Prime Inside of tube. 2- Install nut plates as per dwg (D2873-043) 3- Mask cuffs per note#2. 4- Prime exterior of tube per QSI005. Primer Batch: _____ Start Time: _____ Finish Time: _____	Spray Paint (Spray Paint / NDT Room)		Production	.0000			
240	QC	***VERIFY BY _____ BATCH # TO MATCH W/O _____	QC14 (QC14- Inspect Spray Paint)		Production	.0000			
242	Crosstubes	Assemble as per dwg D119-796- 141 and Qsi 015 1- Abrade mating surfaces with Scotch Brite 7447 and clean with Dupont 4105s or equivalent as per dwg. 2- Install D5152-041 with proseal 890 on concave surface, 0.100" MIN thick as per dwg using DT10089 (identified right and left) ****MAINTAIN CLAMPING PRESSURE ON FOR MIN 72HRS***** Proseal Batch: _____ EXP: _____ PROSEAL CURE TIME 72 HOURS: Start: _____ Finish: _____ 3- Install support and shim using proseal 890 per dwg and clamp in position.	Crosstubes-1 (Crosstubes)		Production	.0000	CR3212- 4-08 D2873- 043 D5123-3 D5124-1 D5152- 041 D5305-1		
244	QC	***VERIFY BY _____ BATCH # TO MATCH W/O _____	QC5 (QC5- Inspect part completeness to step on W/O)		Production	.0000			starts here
246	SprayPaint	***VERIFY BY _____ BATCH # TO MATCH W/O _____ 1- Remove all non-fixed hardware and clean any excess proseal. 2- Scuff tube with Scotch Brite 7447. 3- Mask cuff per note#2. 4- Prime as per dwg and QSI005 5- Apply matte clear as per dwg and QSI005 Clear Batch: <u>P.O. 38687</u>	Spray Paint (Spray Paint / NDT Room)		Production	.0000		AR	MAR 12 2018
248	SprayPaint	***VERIFY BY _____ BATCH # TO MATCH W/O _____ 1- Mask underside of tube as per dwg. Mask cuff per note#2. 2- Scuff tube with Scotch Brite 7447 3- Paint outside of crosstube Paint Batch: <u>138687</u>	Spray Paint (Spray Paint / NDT Room)		Production	.0000		AR	MAR 15 2018
250	QC	***VERIFY BY _____ BATCH # TO MATCH W/O _____	QC14 (QC14- Inspect Spray Paint)		Production	.0000			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Fwd Crosstube Installation Without Step (No Hardware)

D119-796-141 B161772 Operations

D119-796-141 B162475 Operations

D119-796-141 B162476 Operations

D119-796-141 B165466 Operations

D119-796-141 B165467 Operations

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



Dart Aerospace Ltd.
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K6A 1K7
Canada

Tel (613) 632-5200

Process Routings

D119-796-151 Operations

Fwd Crosstube Installation With Step (No Hardware)

	Op No	Operation	Description	Workcenters	Supplier	Type	Weight (lbs)	BOM	Special Comments	Location	
	90	Start up Operation		Start Up Crosstubes-1 (Start Up Crosstubes)		Production	.0000	D119-796-141 D5123-3 D5149-041 MS21920-22			
	130	Crosstubes	1- Install step and clamp with the proper position per dwg D119-796-151 ***Torque all clamps to 50 IN-LBS max.***	Crosstubes-1 (Crosstubes)		Production	.0000				
	140	QC	***RE-CHECK TORCQUE ON CLAMP AS PER DWG.***	QC5 (QC5- Inspect part completeness to step on W/O)		Production	.0000				
	145	DC	Photocopy bluefile and create labels as per PPP D119-796-151 chg 005	DC (Document Control)		Production	.0000				
	150	Packaging	Identify and pack for shipping as per PPP D119-796-151	Packaging3-1 (Identify as per dwg & Stock Location:_____)		Production	.0000				
	160	QC21-FG		QC21 (QC21- Final Inspection - Work Order Release)		Production	.0000				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					